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Review and meta analysis of nontuberculous mycobacteria in the Middle East

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Introduction: Nontuberculous mycobacteria (NTM) are opportunistic pathogens that have increased in recent years. The distribution of NTM species is not similar, and it seems to depend on geographic and environmental regions. In this study, the distribution of NTM species from environmental and clinical samples in the Middle East was reviewed.

Methods: To provide an overview of NTM, all studies addressing NTM in the Middle East were searched from 1984 to 2014; 111 articles were found describing the prevalence of NTM in this region.

Results: A total of 1994 and 886 NTM were included in the clinical and environmental samples, respectively. *Mycobacterium fortuitum* was the predominant NTM identified among the rapidly growing mycobacteria (RGM) in both environmental (32.6%) and clinical (53.1%) samples. The most common slowly growing mycobacteria (SGM) were MAC 297 (25.3%) in clinical cases. Among SGM in environmental samples, the most common species was *Mycobacterium* MAC 49 (11%) which reported from Iraq, Iran and Saudi Arabia.

Conclusion: This is the first study reporting NTM species in the Middle East. In summary, this review demonstrates that the frequency of NTM has increased in this region. In addition to the limitations of the NTM study in some countries of the Middle East, there is an urgent need to develop laboratory methods for NTM identification to prepare a comprehensive report for this region.

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